

CASCADING-SYNCHRONOUS MIXER AND METHOD OF OPERATION

ABSTRACT OF THE DISCLOSURE

A radio frequency (RF) demodulation circuit comprising: 1) a radio frequency (RF) mixer having a first input port capable of receiving an incoming RF signal having a frequency of RF and a second input port capable of receiving a first local oscillator (LO) signal having a frequency of LO, wherein the RF mixer generates a first intermediate frequency (IF) signal having a frequency of IF; 2) a frequency divider circuit capable of receiving the first LO signal having the frequency of LO and generating therefrom a second local oscillator (LO) signal having a frequency of LO/N and synchronized with the first LO signal; and 3) an intermediate frequency (IF) mixer having a first input port capable of receiving the first IF signal and a second input port capable of receiving the second LO signal having the frequency of LO/N, and wherein the IF mixer generates a baseband output signal.